SCHOTTKY BARRIER DIODE



## General description

General Application Schottky barrier rectifier, encapsulated in a DFN1006-2L leadless ultra small Surface-Mounted Device (SMD) plastic package.

## Features and benefits

- Average forward current: $I_{F(AV)} \leqslant$ 1.0A
- Reverse voltage: $V_R \leqslant$ 40 V
- Low forward voltage: $V_F \leqslant$ 0.6V @1A
- Low reverse current: $I_R \leqslant$ 10μA@40V
- Leadless ultra small SMD plastic package
- We declare that the material of product compliance with RoHS requirements and Halogen Free

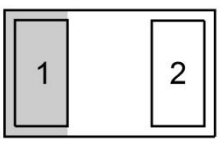
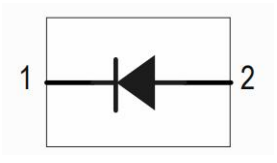
## Application information

- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch mode power supply
- Low power consumption applications
- Ultra high-speed switching
- LED backlight for mobile application

## Ordering information

| Device | Package | Marking | Packaging |
|---|---|---|---|
| MBR4010BS | DFN1006-2L | 4A | 10000/Tape & Reel |

## Schematic & Pin configuration

| Simplified outline | Graphic symbol |
|---|---|
|  |  |

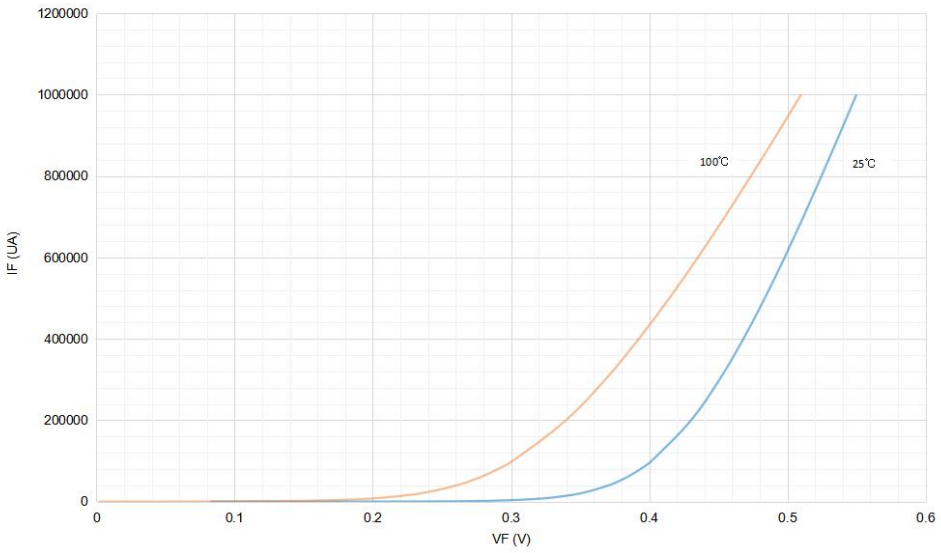
## Maximum Ratings ($T_A$ = 25 °C, unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| DC reverse voltage | $V_R$ | 40 | V |
| Average rectifierd forward current | $I_{F(AV)}$ | 1.0 | A |
| Forward current surge peak(@8.0mS) | $I_{FSM}$ | 7.0 | A |
| Power Dissipation | $P_D$ | 0.6 | W |
| Junction temperature | $T_j$ | 125 | °C |
| Storage temperature | $T_{stg}$ | -40 to +125 | °C |

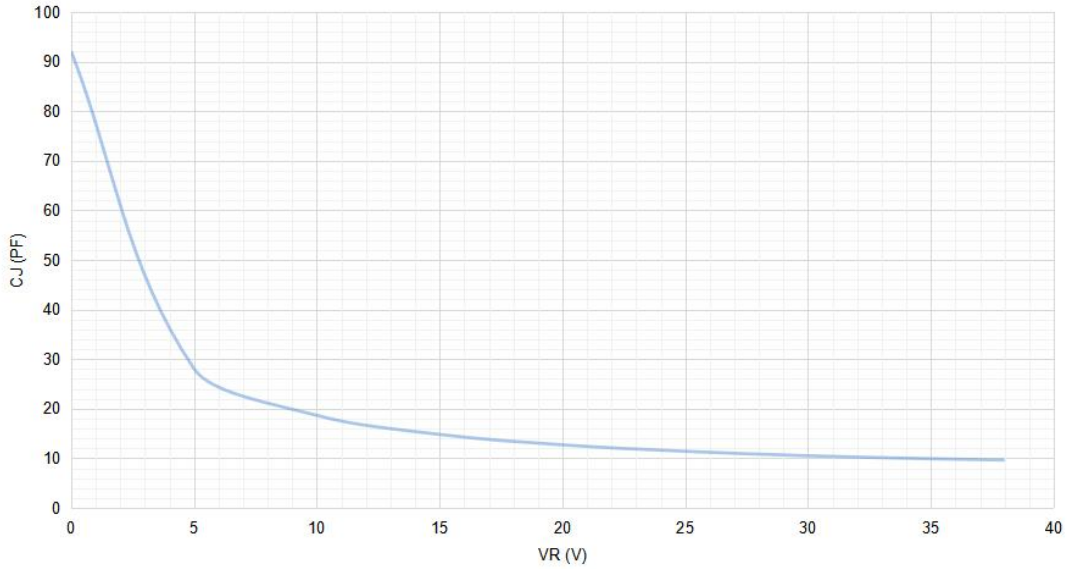
## Electrical Characteristics ($T_A$ = 25 °C, unless otherwise specified)

| Characteristic | Symbol | Min | Typ | Max | Unit | Condition |
|---|---|---|---|---|---|---|
| Forward voltage | $V_F$ | --<br>-- | --<br>-- | 0.42<br>0.60 | V | (IF=0.1A)<br>(IF=1.0A) |
| Reverse current | $I_R$ | -- | -- | 10 | μA | $V_R$=40V |
| Capacitance between terminals | $C_T$ | -- | 92 | -- | pF | $V_R$=0V,f=1MHz |

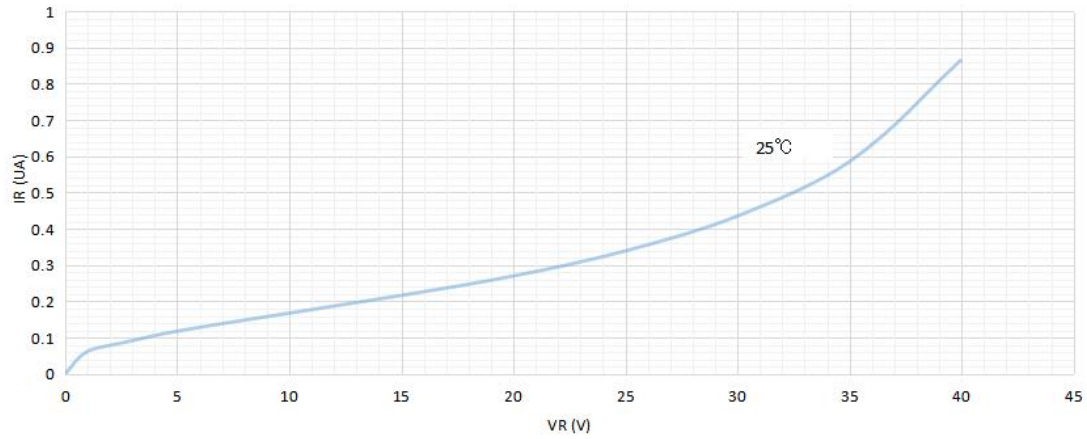
## Typical Characteristics ($T_A$ = 25 °C)



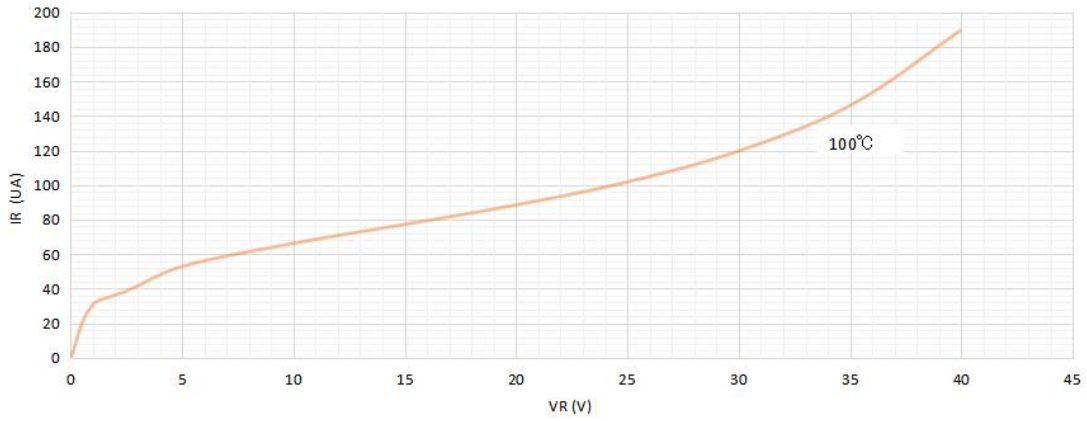

VF--IF




VR--CJ



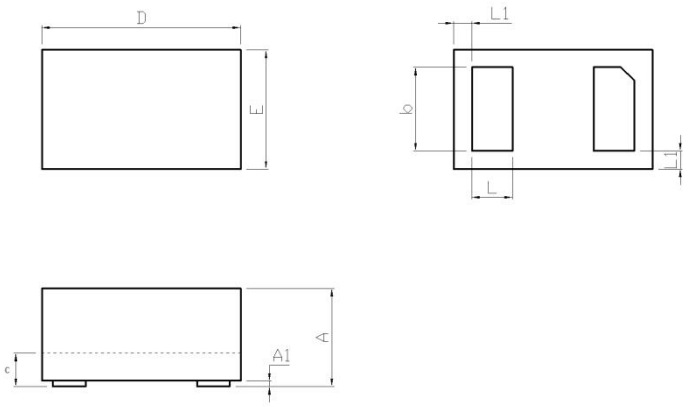

VR--IR (25℃)




VF--IR (100℃)

## Package Outline Dimensions

DFN1006-2L




| SYMBOL | Dimensions In Millimet | |
|---|---|---|
| | MIN | MAX |
| A | 0.46 | 0.50 |
| A1 | 0 | 0.05 |
| b | 0.45 | 0.55 |
| c | 0.1 | 0.14 |
| D | 0.95 | 1.05 |
| E | 0.55 | 0.65 |
| L | 0.20 | 0.30 |
| L1 | 0.035 | 0.065 |
| h | 0.07 | 0.17 |